

TECHNICAL FIELD

In the claims:

Please cancel claims 1-19 without prejudice. Please add claims 54-73 as follows.

54. (New) An apparatus comprising a thermal interface having a first side to attach to a cooling device by way of an adhesive attached thereon and a second side to receive heat from an integrated circuit by contacting the integrated circuit at a heat transfer area, wherein the adhesive is attached to areas of the first side that lie outside of the heat transfer area.
55. (New) The apparatus of claim 54, wherein the thermal interface comprises a film having a phase-change material to change from a solid phase to a liquid phase by receiving the heat from the integrated circuit.
56. (New) The apparatus of claim 54, wherein the adhesive is attached along a plurality of edges of the thermal interface.
57. (New) The apparatus of claim 54, wherein the plurality consists essentially of two.
58. (New) The apparatus of claim 54, wherein the plurality comprises four.
59. (New) The apparatus of claim 54, wherein the adhesive is attached around a periphery of the heat transfer area and substantially not attached within the heat transfer area.
60. (New) The apparatus of claim 54, wherein the adhesive has a thickness between about 0.125 millimeters and 0.25 millimeters.
61. (New) The apparatus of claim 54, further comprising the cooling device.

62. (New) The apparatus of claim 61, further comprising the integrated circuit attached to the thermal interface.

63. (New) A device comprising:

a cooling device to receive heat generated by an integrated circuit;

a phase changing thermal interface film to thermally couple the cooling device with the integrated circuit, the phase changing thermal interface film comprising:

a heat transfer area between the integrated circuit and the cooling device,

a first surface to receive the heat generated by the integrated circuit by contacting the integrated circuit within the heat transfer area,

a phase change material to change from a solid phase to a liquid phase by absorbing the heat received from the integrated circuit at the first surface, and

a second surface to provide the received heat to the cooling device by contacting the cooling device within the heat transfer area; and

an adhesive to attach the thermal interface to the cooling device, wherein the adhesive is attached to the thermal interface substantially outside the heat transfer area.

64. (New) The apparatus of claim 63, wherein the film comprises a Chomerics T443 film.

65. (New) The apparatus of claim 63, wherein the adhesive comprises a pressure sensitive adhesive.

66. (New) The apparatus of claim 63, wherein the adhesive has a thickness between about 0.125 millimeter and 0.25 millimeter.

67. (New) The apparatus of claim 63, wherein the adhesive attaches the thermal interface to the cooling device at a plurality of edges of the thermal interface.

68. (New) The apparatus of claim 67, wherein the plurality consists essentially of two.

69. (New) The apparatus of claim 63, wherein the adhesive is attached at a plurality of locations along a periphery of the thermal interface.

70. (New) The apparatus of claim 63, further comprising the integrated circuit attached to the thermal interface to generate the heat and to provide the generated heat to the thermal interface.

71. (New) An apparatus comprising:

a thermal interface comprising a heat transfer area having a first surface to receive heat from a device having a circuit and having a second surface to provide the heat;

a cooling device to receive the heat provided by the second surface of the thermal interface; and

adhesive means to attach the cooling device to the second surface of the cooling device without obstructing heat transfer through the heat transfer area.

72. (New) The apparatus of claim 71, further comprising the circuit device coupled with the first surface of the thermal interface.

73. (New) The apparatus of claim 72, wherein the cooling device is pre-attached to the thermal interface substantially before the circuit device is coupled with the thermal interface.

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